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Amend B  
10.29.02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 3378**  
Mitsuaki OSHIMA et al. : **Docket No. 2000\_1420**  
Serial No. 09/686,467 : **Group Art Unit 2634**  
Filed October 12, 2000 : **Examiner A. Le**  
**COMMUNICATION SYSTEM** :

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**AMENDMENT**

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975

Assistant Commissioner for Patents,  
Washington, D.C.

Sir:

In response to the Office Action of April 24, 2002, the period for response to which having been extended by three months to October 24, 2002, please amend the above-identified U.S. patent application as follows:

IN THE CLAIMS:

**Please cancel claims 13-21 without prejudice or disclaimer to the subject matter therein.**

**Please add claims 22-29 as follows:**

22. A signal transmission apparatus comprising:

- a modulator operable to modulate a carrier wave with an input signal to produce a modulated signal, and

- a transmitter operable to transmit the modulated signal,

said input signal containing a first data stream including g values of bit patterns and a second data stream, where g is an integer number, and

the modulated signal having symbols, each of which is representing one of m signal points in a vector space diagram, where m is an integer number and the vector space diagram includes an I axis and a Q axis extending in directions perpendicular to each other,

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